

Z-CAD® HTL - Strong Zirconia

41% translucency combined with highest flexural strength.
Consequence in CAD/CAM. For all anterior and
posterior restorations.



Strength in action

Z-CAD® HTL

The advantage of this biocompatible high-performance zirconia lies in the enhanced translucency maintaining high flexural strength utilizing a wide range of optimized dentin colored discs. A broad spectrum of indications is provided for dental technicians, in all situations to fulfill esthetic restorations.

Bar constructions, long span width frameworks, supra structures, single crowns or 1-16 unit restorations, with Z-CAD® HTL you are always on the safe side. Screw or cement retained, your restoration will fulfill all your needs.

Primarily this material is recommended as dentin-framework which is finished with an equivalent veneering materials in a traditional layering technique. Alternatively, Zirconia press-ceramic can be utilized.

Z-CAD® HTL

Strong Zirconia

Is a high-performance zirconia which meets the ISO 6872:2019 standard class 5, it is available in white or all 16 A1-D4 dentin colors, according to the *Vita classical A1-D4 color system. Typical strength of more than 1100 MPa (biaxial measurement). Translucency of 41%. The strong solution for daily business in the dental laboratory.



For customization of the white substructures we recommend Z-CAD® Deep liquid. This is extremely well-suited for dipping or paint-on methods.

Metoxit Z-CAD® HTL white zirconia blanks

Art. No.	Product HTL white	Geometry Ø 98,5mm*
407013	Z-CAD HTL 98.5x10mm white	
407046	Z-CAD HTL 98.5x12mm white	
407014	Z-CAD HTL 98.5x14mm white	
407015	Z-CAD HTL 98.5x16mm white	
407016	Z-CAD HTL 98.5x18mm white	
407017	Z-CAD HTL 98.5x20mm white	
407047	Z-CAD HTL 98.5x25mm white	

Metoxit Z-CAD® HTL pre colored zirconia blanks



Art. No.	Product HTL A1 - A4
409782	Z-CAD HTL 98.5x10mm A1
409784	Z-CAD HTL 98.5x14mm A1
409786	Z-CAD HTL 98.5x18mm A1
409788	Z-CAD HTL 98.5x25mm A1
409789	Z-CAD HTL 98.5x10mm A2
409791	Z-CAD HTL 98.5x14mm A2
409793	Z-CAD HTL 98.5x18mm A2
409795	Z-CAD HTL 98.5x25mm A2
409796	Z-CAD HTL 98.5x10mm A3
409798	Z-CAD HTL 98.5x14mm A3
409800	Z-CAD HTL 98.5x18mm A3
409802	Z-CAD HTL 98.5x25mm A3
409803	Z-CAD HTL 98.5x10mm A3.5
409805	Z-CAD HTL 98.5x14mm A3.5
409807	Z-CAD HTL 98.5x18mm A3.5
409809	Z-CAD HTL 98.5x25mm A3.5
409810	Z-CAD HTL 98.5x10mm A4
409812	Z-CAD HTL 98.5x14mm A4
409814	Z-CAD HTL 98.5x18mm A4
409816	Z-CAD HTL 98.5x25mm A4

Geometry Ø 98,5mm *

Art. No.	Product HTL B1 - B4
409817	Z-CAD HTL 98.5x10mm B1
409819	Z-CAD HTL 98.5x14mm B1
409821	Z-CAD HTL 98.5x18mm B1
409823	Z-CAD HTL 98.5x25mm B1
409824	Z-CAD HTL 98.5x10mm B2
409826	Z-CAD HTL 98.5x14mm B2
409828	Z-CAD HTL 98.5x18mm B2
409830	Z-CAD HTL 98.5x25mm B2
409831	Z-CAD HTL 98.5x10mm B3
409833	Z-CAD HTL 98.5x14mm B3
409835	Z-CAD HTL 98.5x18mm B3
409837	Z-CAD HTL 98.5x25mm B3
409838	Z-CAD HTL 98.5x10mm B4
409840	Z-CAD HTL 98.5x14mm B4
409842	Z-CAD HTL 98.5x18mm B4
409844	Z-CAD HTL 98.5x25mm B4

Geometry Ø 98,5mm *

Art. No.	Product HTL C1 - C4
409845	Z-CAD HTL 98.5x10mm C1
409847	Z-CAD HTL 98.5x14mm C1
409849	Z-CAD HTL 98.5x18mm C1
409851	Z-CAD HTL 98.5x25mm C1
409852	Z-CAD HTL 98.5x10mm C2
409854	Z-CAD HTL 98.5x14mm C2
409856	Z-CAD HTL 98.5x18mm C2
409858	Z-CAD HTL 98.5x25mm C2
409859	Z-CAD HTL 98.5x10mm C3
409861	Z-CAD HTL 98.5x14mm C3
409863	Z-CAD HTL 98.5x18mm C3
409865	Z-CAD HTL 98.5x25mm C3
409866	Z-CAD HTL 98.5x10mm C4
409868	Z-CAD HTL 98.5x14mm C4
409870	Z-CAD HTL 98.5x18mm C4
409872	Z-CAD HTL 98.5x25mm C4

Geometry Ø 98,5mm *

Art. No.	Product HTL D2 - D4
409873	Z-CAD HTL 98.5x10mm D2
409875	Z-CAD HTL 98.5x14mm D2
409877	Z-CAD HTL 98.5x18mm D2
409879	Z-CAD HTL 98.5x25mm D2
409880	Z-CAD HTL 98.5x10mm D3
409882	Z-CAD HTL 98.5x14mm D3
409884	Z-CAD HTL 98.5x18mm D3
409886	Z-CAD HTL 98.5x25mm D3
409887	Z-CAD HTL 98.5x10mm D4
409889	Z-CAD HTL 98.5x14mm D4
409891	Z-CAD HTL 98.5x18mm D4
409893	Z-CAD HTL 98.5x25mm D4

Geometry Ø 98,5mm *

*Additional shapes and sizes
(e.g. cylindrical or Ø 95mm) on request

SWISS MADE

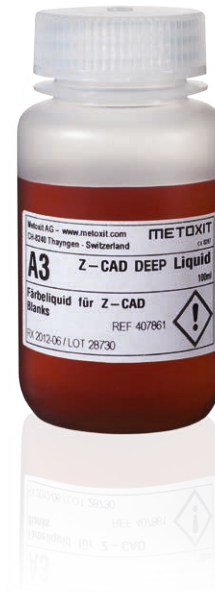
Z-CAD® HTL Strong Zirconia
Bending strength > 1100Mpa
ISO 6872:2019 Class 5

Z-CAD® Deep liquid

These ready to use, water soluble, infiltration liquids are specifically produced, to color the Metoxit AG white zirconia substructures. Regardless if dipping or paint-on methods are applied the coloring liquids emerge into the surface of unsintered substructures.

Z-CAD® Deep liquid dentin

Art. No.	Product Deep liquid A1 - D4	Content
411950	Z-CAD Deep liquid A1	100ml
411951	Z-CAD Deep liquid A2	100ml
411952	Z-CAD Deep liquid A3	100ml
411953	Z-CAD Deep liquid A3.5	100ml
411954	Z-CAD Deep liquid A4	100ml
411955	Z-CAD Deep liquid B1	100ml
411956	Z-CAD Deep liquid B2	100ml
411957	Z-CAD Deep liquid B3	100ml
411958	Z-CAD Deep liquid B4	100ml
411959	Z-CAD Deep liquid C1	100ml
411960	Z-CAD Deep liquid C2	100ml
411961	Z-CAD Deep liquid C3	100ml
411962	Z-CAD Deep liquid C4	100ml
411963	Z-CAD Deep liquid D2	100ml
411964	Z-CAD Deep liquid D3	100ml
411965	Z-CAD Deep liquid D4	100ml



Z-CAD® DEEP Liquid Special

Art. No.	Product Deep liquid effect	Content
411966	Z-CAD Deep liquid blue1	100ml
411967	Z-CAD Deep liquid blue2	100ml
411968	Z-CAD Deep liquid grey1	100ml
411969	Z-CAD Deep liquid grey2	100ml
411970	Z-CAD Deep liquid yellow	100ml
411971	Z-CAD Deep liquid orange	100ml
411972	Z-CAD Deep liquid brown	100ml
411973	Z-CAD Deep liquid pink	100ml

This perfectly tuned system of Z-CAD® Deep liquids offers easy handling and a high reproducibility for to be colored restorations.

The Z-CAD® Deep liquid Set is comprised of the 16 dentin colors, according to the *Vita classical A1-D4 color system.

We also offer a Z-CAD® Deep liquid "effect set" which is comprised of eight colors for individualization.

Z-CAD® Deep liquid sets

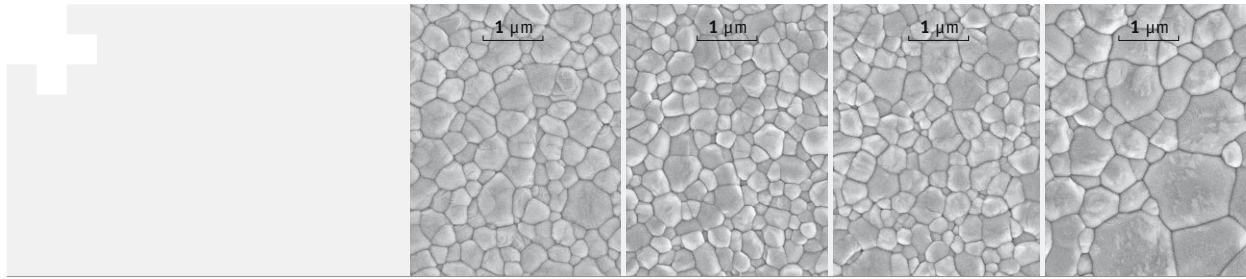
Art. No.	Product Deep liquid set	Content
411974	Z-CAD Deep liquid dentin set	16x 100ml
411975	Z-CAD Deep liquid effect set	8x 100ml

*VITA classical A1 - D4® is a registered trademark of VITA Zahnfabrik H. Rauter GmbH & Co. KG in Bad Säckingen.

SWISS MADE

Z-CAD® HTL Strong Zirconia
Translucency (1mm, D65) = 41%
ISO 6872:2019 Class 5

Z-CAD® Materials



	Einheit	Z-CAD® HD	Z-CAD® HTL	Z-CAD® One4All	Z-CAD® smile
Chemical Composition					
ZrO ₂ + HfO ₂ + Y ₂ O ₃	wt%	> 99.5	> 99.5	> 99.5	> 99.5
Y ₂ O ₃	wt%	5.2	5.2	6.9	9.3
Al ₂ O ₃	wt%	0.25	0.05	0.05	0.05
Sum of all other oxides	wt%	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5
Properties					
Density	g/cm ³	6.08	6.08	6.06	6.04
Bending strength (biaxial)	MPa	> 1100	> 1100	> 1000	> 610
Grain size	µm	< 0.4	< 0.4	< 0.5	< 0.6
Fracture Toughness K _{IC}	MPa√m	5	5	5	3.5
Hardness HV ₁₀	-	1250	1250	1250	1250
Translucency (1mm, D65)	%	35	41	45	49
Coefficient of thermal expansion (CTE)	10 ⁻⁶ /K	11.2	11.2	10.8	10.6
Thermal conductivity	W/mK	2.5	2.5	2.5	2.5
Solubility (acetic acid)	µg/cm ²	≤ 100	≤ 100	≤ 100	≤ 100
Radioactivity	Bq/kg	≤ 200	≤ 200	≤ 200	≤ 200
Indications					
		bar konstruktions, discoloration, abutments, frames...	bar konstruktions suprastructures, frames, bridges...	inlay, onlay, veneer, crowns, bridges...	inlay, onlay, veneer, crowns, 3-unit bridges...
Normative specification					
		dental restorations according to ISO 6872:2019 class 5	dental restorations according to ISO 6872:2019 class 5	dental restorations according to ISO 6872:2019 class 5	dental restorations according to ISO 6872:2019 class 4

All information and data correspond to the present state of our knowledge concerning properties and applications. For more specific product information, see our instructions for use. If you do not comply with the instructions for use no guarantee for the specified material properties is taken.